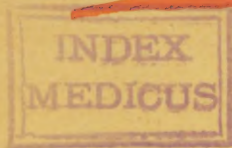
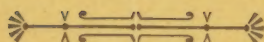


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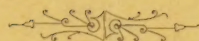


OLIVE OIL AS A REMEDY IN THE TREAT-
MENT OF GASTRIC ULCER.



By EMANUEL J. SENN, M. D.,

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The abuse of one of the most important organs of the body, in fact, the most important as far as health is concerned, namely, the stomach, by indiscreet and injudicious habits, bears fruit in which the ætiological factor is a matter of fact. I refer to such maladies as dyspepsia, gastric catarrh, and gastritis; but on the other hand the cause of gastric ulcer is still enshrouded in doubt. Many hypotheses have been advanced from time to time, but they as yet have not been substantiated by clinical and experimental proofs.

While pathology is of vital importance in scientific medicine, it seems that too much stress is laid on this branch, and ætiology is made a too unimportant feature.

The cause of disease is by all means the most essential, as when this is known it is often easy to counteract the effect. When the ætiology is not positive, the most logical and reasonable theory should serve as the basis for rational treatment.

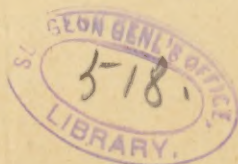
I will proceed to give the various hypotheses of the ætiology of gastric ulcer which have been advanced by eminent observers, several having been demonstrated by original research.

Ulcer of the stomach is most frequent in young adults during and just after puberty. It predominates in the female sex, the ratio being 3 to 2 according to Willigk.

The following questions present themselves:

Is gastric ulcer due:

1. To an abnormal increase of gastric juice?
2. To a qualitative or quantitative deficiency in the blood?



3. To an anæmic or degenerated area in the mucous membrane of the stomach?

4. To the combined influence of hyperacidity upon a pathological mucous surface, which acts as a predisposing cause simply, while the morbid gastric juice is the active factor?

Cruveilheir was the pioneer in giving the first thorough description of this affection.

Pavy introduced a quantity of acid into the normal stomach, and no pathological change took place; but if the stomach was rendered hyperacidulous and the circulation interrupted at the same time, it digested itself. Since then experiments have repeatedly been made by Panum, and others, on animals by producing artificial emboli and ligating small arterial branches in the gastric coats, thereby reducing the physiological resistance in limited, circumscribed areas. These conditions were always followed by concomitant ulceration, but these ulcers, artificially produced, differed from genuine gastric ulcer in rapidly undergoing repair.

These experiments would tend to show that a continuous irritating influence is necessary to produce a permanent ulcer, which points strongly to hyperacidity.

Ebstein and Schiff produced ecchymoses, and even ulceration, in rabbits and dogs by injury to the anterior corpora quadrigemina, and also by strychnine poisoning, very probably by causing an increased vascular pressure.

That gastric ulcer bears some relation to a neurosis from an ætiological standpoint has appeared very probable to me, as almost every case which has come under my observation manifested very strong symptoms of a nervous character, some even bordering on hysteria, especially during a hæmorrhage or a vomiting seizure. In one case these attacks came on at regular intervals, about eight o'clock each night, accompanied by great pain, not only over the stomach but also radiating down the limbs, with extreme nervousness, finally ending in delirium. After several hours duration the patient would sink into a sleep and appear perfectly well the next day and until the following attack.

Virchow taught years ago that disturbances in the c r

culation played the principal role in the production of ulcer. This has been verified by Steiner, who found the blood-vessels diseased in two-thirds of the cases in which a subsequent autopsy revealed gastric ulcer.

When an abnormal gastric juice attacks an already debilitated area Klebs asserts that the irritating effects of the juice provokes contraction of the exposed ends of the arteries, thereby producing a localized anæmia which is favorable to the production of an erosion.

Stress must be laid on the fact that morbid blood is a powerful adjuvant in the causation of gastric ulcer, because a large percentage of its victims are anæmic and chlorotic girls, while it is a rare affection among healthy persons. It is evident that impoverished blood is only one of the many predisposing causes, as an anæmic gastric coat would be uniformly affected in different regions; but a more powerful factor is essential to produce a point of least resistance.

Traumatism has been regarded as a cause of gastric ulcer, but it obviously, like the various causes mentioned before, devitalizes a region, and would not be of clinical importance, except for a hyperacidity of the gastric secretion. The stomach may be subjected to severe treatment without causing ulcer, as the following celebrated case reported by Dr. Marcet will testify:

In the year 1799 an American sailor saw a juggler in Havre perform the trick of knife-swallowing. Returning to his vessel somewhat intoxicated, he was foolhardy enough to try to swallow his open pocket-knife, and, succeeding in this, he "ate" three more. Three passed off in the stool during the next few days, but one never made its appearance. One evening, six years later, he again swallowed portions of six knives, but this time not without unpleasant, though very transient, results, on account of which he was admitted to a hospital. He did this frequently, till he had swallowed about thirty knives. Finally he was taken seriously ill, and died in Guy's Hospital, London, in 1809. In the stomach some thirty pieces of blades, in parts markedly corroded, together with handles, were found; two blades in the colon and rectum, which were placed transversely, and had perforated the intestinal wall (without causing peritoni-

tis), but no recent or old ulcers of the stomach, or any remains of them.

Vanni reports fourteen cases of round ulcer of traumatic origin.

The ætiology of this disease would not be complete without a microbic cause, as such is laid at the door of most diseases in which the cause is enveloped in a misty cloud.

Although in the face of other facts a microbic origin does not seem reasonable, it has been advanced as an explanation. Dujardin-Beaumetz (*Jour. d'Hygiene*, 1891) looks on gastric ulcer as due to an infectious cause, which lowers the vitality of the stomach wall, but he considers a hyperacidity of the gastric juice an essential concomitant.

A. Boettcher, in autopsies made by him, found micrococci on the borders and bases of ulcers.

Letulle (*Origine Infectieuse de Certains Ulcers Simples de l'estomac ou du Duodenum*) found numerous streptococci in the veins of the submucosa and of the uterus, during a case of puerperal septicæmia; the patient also had gastric ulcer. Pure cultures of these injected into guinea-pigs caused ulceration of the stomachs of the animals. Ulcer here was caused, not by the septic properties of the microbes, but through embolism of some of the minute gastric vessels, thereby preparing a fertile field for the action of the gastric juice. Analogous results were obtained by injections of cultivations of the staphylococcus pyogenes aureus from abscesses.

Hyperacidity is, with few exceptions, found in all cases of gastric ulcer which are severe enough to produce clinical symptoms. This has been proved by the investigations of Von den Velden, Ewald, Jaworsky and others.

Riegel says: "That this hyperacidity is a constant phenomenon in ulcer can now be regarded as positive, inasmuch as the results of 382 analyses in all of the 42 cases treated by us during the past year, showed the hyperacidity to be equally constant."

Ewald, on the other hand, is not as radical in his views and declares that the hyperacidity, although frequent, is by no means invariably a concomitant condition.

Rokitansky and Camerer thought hyperacidity due to paralysis of the vagi.

In the light of the foregoing experiments and explanations of the different investigators, it seems evident that gastric ulcer, in at least in the great majority of cases, is the result of an increased acidity of the gastric juice upon an enfeebled area. The cause of this abnormality of the juice, and also the cause of degeneration of limited, circumscribed parts of the stomach, remains to be solved by more careful clinical observation and experimental research.

Believing that these ætiological factors are, at least in the great majority of instances, the cause of ulcer, I have administered large doses of olive oil, which, as far as theory is concerned, answered these pathological indications, and proved beneficial in practice.

The rest cure advised by Wilson Fox and Balthazar Forster, in England, and later introduced into Germany by von Ziemssen and Leube, consisted of rest in bed with rectal alimentation.

Alkaline waters, such as Carlsbad, Vichy, Fms, etc., have been highly recommended for neutralization of the hyperacidity.

The "rest cure" seems to be most beneficial during the early stages of the disease. It is analogous to a tubercular focus in a joint which is benefited by immobilization in its incipency, but requires more thorough treatment in an advanced stage.

The alkaline treatment of course diminishes the acidity, but this effect is only temporary, while hypersecretion persists. As it is impossible to secure absolute rest of the stomach, gastric peristalsis acting through almost imperceptible stimuli, a lubricating medium over the denuded surface of the stomach would not only decrease the friction, but would also prevent contact with the irritating effects of the abnormal gastric juice.

With these ideas in view I administered large doses of the oil. In the case which I report the oil manifested another striking and most desirable quality in favoring and facilitating coagulation of blood in the stomach. In profuse hæmatemesis, when bright red blood was vomited in great

quantities after ingestion of the olive oil, the blood became of a thick, gelatinous consistency, and of a deep chocolate color.

Olive oil is unctious, yellow or greenish-yellow in color, with a sweetish taste, and has a slightly laxative action. In the stomach it does not undergo any chemical decomposition.

It was given in large doses at short intervals, in order to keep a continuous film over the diseased mucous membrane and protect it from the corroding effects of the morbid secretion. It was palatable to the patient and did not produce any disagreeable symptoms whatever.

As yet I have not had opportunity to observe its effects in a sufficient number of cases to positively prove its curative merits; but the case I refer to was of such an obstinate character, and persisted for so many years, that I considered it of enough importance to be reported, especially when statistics reveal so few cures in cases of long standing.

It is in recent cases where brilliant results have been attained.

I submit this case with the hope that others will follow this line of treatment and record their results.

Christine S., Swedish, unmarried. Cloak-maker by occupation. Age 44 years. Suffered with stomach trouble for a period of twenty years, which consisted of epigastric pain and hæmatemesis. At 28 years of age she had two hæmorrhages, which were controlled with ice, followed by a violent hæmorrhage a year and a half later, and which persisted for one week. Two years later another one followed.

I ascertained that between these severe attacks she vomited small quantities of blood at repeated intervals, but which did not make any serious inroads upon the general health.

After the severe attacks she was obliged to remain in bed for months in order to regain strength.

Patient entered St. Joseph's hospital June 1, 1893, in a profoundly anæmic condition, having been sick for three weeks previously. Complained of excruciating epigastric pain, which at times radiated to the lumbo-dorsal region. This pain was generally continuous, but often intermittent

She was subject to almost daily hæmorrhages, which came on soon after the painful attacks, and seemed to afford relief in the same manner as after removing tension in a palmar abscess by incision.

The hæmorrhages were counteracted by ice, both internally and externally. Patient was also given nitrate of silver in pills, together with opium, to check pain and mitigate vomiting, but without effect. Cocaine also did not afford relief. Tincture chloride of iron likewise proved useless.

As a *dernier ressort* Ewald's "rest cure" was given a trial; but the patient instead of improving complained of more pain, and vomiting of blood also increased. All efforts proving futile, and as the patient's life was fast ebbing away, olive oil was given a trial. A tablespoonful was taken every two hours. Hæmorrhage at once diminished. The blood, which formerly was thin and of a bright red color, now became thick and jelly-like, reminding one of liver-tissue. Coagulation must have been a very rapid process. The hæmorrhages gradually grew scantier and the intervals longer.

The patient rapidly grew stronger, and after four weeks left the hospital cured. She has since visited the hospital and is in the best state of health.

